

The EU, the WTO and indirect land use change

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The EU, the WTO and Indirect Land-Use Change

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Efforts to meet the European Union's (EU) alternative energy targets have resulted in increased production of biofuels. This production has resulted in deforestation-related emissions through displacement of agricultural production, a problem known as indirect land-use change. The European Commission (EC) has proposed regulatory options to respond to this problem, but all risk not being in conformity with World Trade Organization (WTO) law. Trade law challenges result from the underlying methodological uncertainty, and the attempt to address a systemic problem on the level of individual producers. Yet, this does not necessarily indicate that the intent of these regulations is to protect EU markets. Thus, this is an instructive case study to examine the relationship between WTO law and complex, emerging environmental problems.

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1 INTRODUCTION

Through its 2009 Renewable Energy Directive (RED)¹ and Fuel Quality Directive (FQD),² the EU laid down alternative energy targets that have created additional demand for biofuels. Meeting this demand has caused a vast quantity of additional land to come into cultivation.³ The RED and the FQD contain sustainability criteria for biofuels that aim to ensure this increased production does not lead to higher greenhouse gas emissions or biodiversity loss.⁴ However, both within and outside of EU bodies, it has been suggested that these aims might be

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¹ European Council Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC [2009] OJ L140/16 (RED).

² European Council Directive 2009/30/EC of the European Parliament and of the Council amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC [2009] OJ L 140/88 (FQD).

³ Estimates of the necessary land area vary. Reuters averaged fifteen different figures to estimate that the additional land area needed to meet EU biofuels targets is approximately the size of Denmark: P. Harrison, *Special Report: Europe Finds Biofuels and Politics Don't Mix*, Reuters (July 5, 2010), <http://uk.reuters.com/article/2010/07/05/uk-biofuels-europe-idUKTRE6641G020100705> (accessed June 20, 2012).

⁴ RED Art. 17; FQD Art. 7.

undermined by another problem: indirect land-use change (ILUC). ILUC results from the overall expansion in agricultural production due to the EU's biofuels use targets. As a result, non-biofuels crops, or biofuels not intended for the EU, are being grown in different areas, including land that has never before been cultivated for agriculture, resulting in greenhouse gas emissions from deforestation. Additional cropland coming into cultivation may also be grown in areas that violate other aspects of the EU criteria, such as its biodiversity conservation guidelines.

Due to ILUC, EU biofuels policies risk being a climate change problem presented as a climate change solution.⁵ Addressing this problem may be necessary to preserve the EU's core objective of reducing greenhouse gas emissions. For this reason, the EU is currently considering several options to extend existing sustainability criteria so that they address ILUC. The options include introducing additional sustainability criteria for certain biofuels that focus on ILUC, attributing emissions to biofuels based on their ILUC impact, or raising the overall requirement for emissions savings for biofuels across the board.

Past WTO disputes suggest that these approaches may not conform with WTO law. The fact that the EU is responding to problems too new for scientific consensus, or a multilateral regulatory framework may make it more difficult to justify binding regulation that evaluates feedstocks based upon ILUC emissions levels. Further, it is difficult to document ILUC as it cannot be observed directly, and results from a complex interaction of market-based, political and regulatory forces. As has already proven the case in California, which adopted a similar approach, the basis for this assessment will likely be controversial as affected producers contest the calculation methodology.⁶ Thus the first two options may be seen to discriminate against countries that grow certain feedstock types.

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Likely in part to avoid this very problem, the EC has also proposed the third more general approach of raising the requirements for greenhouse gas emissions savings for biofuels across the board. Yet, there is no guarantee that it will have any impact on reducing levels of ILUC, which could continue to undermine any emissions savings gained. While it avoids singling out individual countries, the nexus between the regulation and its goal of addressing ILUC is tenuous at best.

These problems are significant. However, they do not necessarily indicate that the measure intends to discriminate between or among the EU's trade partners. The case study suggests the need to examine more closely the problems posed by complex environmental regulation based upon emerging problems for which there is not a great deal of scientific or international consensus. Assuming that WTO

⁵ See sec. 2(b)–(c).

⁶ See sec. 3(a).

trade norms lead to regulatory chill, or result in a trade conflict that the EU loses, WTO rules will have acted as a force in undermining the RED's core objective of reducing omissions. The example prompts thought on how the WTO system may provide appropriate deference to such regulation.

This article is divided into three parts. The first provides an overview of the controversy surrounding ILUC and the EU's response. The second analyses the compatibility of the EU's proposed solutions with GATT Articles I, III and XX and the TBT Agreement Articles 2.1 and 2.2. This analysis is very preliminary, as the EC has not yet provided much detail about regulatory options. The third comments upon the implications with respect to the balance between the EU's environmental objectives and its WTO obligations.

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2 ILUC: A COMPELLING AND COMPLEX ISSUE

2.1 THE EU'S RESPONSE TO ILUC

Though the existing RED and FQD criteria do not set out any criteria to respond to the problem of ILUC, they do recognize its importance. The RED contains the following language:

The Commission should develop a concrete methodology to minimise greenhouse gas emissions caused by indirect land-use changes. To this end, the Commission should analyse, on the basis of best available scientific evidence, in particular, the inclusion of a factor for indirect land-use changes in the calculation of greenhouse gas emissions and the need to incentivise sustainable biofuels which minimise the impacts of land-use change and improve biofuel sustainability with respect to indirect land use change.⁷

The EC committed to reviewing the impact of ILUC and proposing a strategy for minimizing that impact by the end of 2010. In December 2010, the EC published a report that contained a literature review of an array of studies, including reports from the Institute for Prospective Technological Studies of the EC's Joint Research Centre (JRC), the International Food Policy Research Institute (IFPRI) and the Institute for Environment and Sustainability of the EC's JRC.⁸

The EC's report emphasized the uncertainty of the science surrounding ILUC and the 'deficiencies and limitations' of the process of modelling these impacts. They noted that different models yielded different results, depending on their underlying assumptions.⁹ One of the limitations of the models was that they could not take into account all of the factors that accounted for land-use change.

⁷ RED, *supra* n. 1, at Preamble para. 85.

⁸ European Commission, *Report from the Commission on Indirect Land Use Change Related to Biofuels and Bioliquids*, Brussels COM(2010) 811 final.

⁹ *Ibid.*, at 8–9.

Further, they stated that the inadequacy of current models meant that it was not possible to calculate the conversion of forest on peat lands, one of the main ecosystems of concern with respect to ILUC. They estimated that a model that took into account more factors would reduce the estimated land-use change.¹⁰ They concluded that ‘indirect land-use change can have an impact on greenhouse gas emissions savings associated with biofuels, which could reduce their contribution to the policy goals, under certain circumstances in the absence of intervention’.¹¹

The EC outlined four policy options for a response. These were: (1) take no action, but continue to monitor; (2) increase the minimum greenhouse gas emissions savings threshold across the board; (3) introduce additional sustainability requirements on certain types of biofuels; and (4) attribute a particular quantity of greenhouse gas emissions to biofuels based upon their ILUC impact.¹² The EC also undertook public consultations on the issue. These consultations demonstrated that most industry and farmers’ associations, as well as overseas countries, supported taking no action, or responding through international efforts. Most NGOs and non-biofuels producing industrial stakeholders thought that the EU should introduce ILUC emissions within existing greenhouse gas emissions savings requirements.¹³

The EC committed to formulating a response by mid-2011, a deadline which they did not uphold. On 2 May 2012, the college of EU commissioners met and demonstrated widespread support for responding to the problem, and the Directorate Generals for Energy (DG Energy) and Climate Action (DG Clima) have proposed to formulate a proposal by the end of 2012.¹⁴ This may not be a straightforward process. According to EurActiv, DG Clima has favoured including ILUC regulation in the RED and the FQD, while DG Energy has not supported this position.¹⁵ Further, as the RED and FQD are not delegated acts, any amendments to their sustainability criteria for biofuels will need to be approved by the Parliament and the Council.

¹⁰ *Ibid.*, at 10–11.

¹¹ *Ibid.*, at 14.

¹² *Ibid.*

¹³ *Ibid.*, at 13.

¹⁴ *Briefing: Biofuels and ILUC*, Transport & Env. (May 2012).

¹⁵ *EU Report Questions Conventional Biofuels’ Sustainability*, EurActiv.com (Apr. 11, 2012), <http://www.euractiv.com/climate-environment/eu-report-questions-conventional-news-512076> (accessed June 8, 2012).

2.2 ILUC CONTROVERSY IN THE EU

The EC's conclusions in their 2010 report were relatively circumspect, limiting the necessity of response to 'certain circumstances' and stating that ILUC might reduce the contribution of biofuels to the policy goals, rather than undermining these goals completely. The report suggested that measures should be taken based upon the precautionary principle, rather than concluding outright that ILUC was a serious problem.¹⁶

Despite these conclusions, controversy is growing within EU bodies. The extent of the controversy has emerged from a combination of official reports and analyses, and internal and leaked communications. The cumulative effect of these statements reveals a loss of confidence in biofuels targets due in large part to the undermining impact of ILUC.

Concerns about including ILUC in biofuels sustainability criteria were surfacing before the EC's initial report in late 2010. In February 2010, for example, the *New York Times* reported that a civil servant in the agriculture department at the EC, wrote a memo to a colleague that 'an unguided use of ILUC would kill biofuels in the EU'.¹⁷

More recently, in January 2012, EurActive reported on leaked EU data suggesting that palm oil, rapeseed and soybean oil had higher greenhouse gas emissions than conventional fuel when ILUC was taken into account. Instead, they were on par with oil obtained from the notoriously dirty tar sands of Canada. These results were disclaimed by the EC as they had not yet been published.¹⁸ While palm oil is tropical, rapeseed and soybean oil are primary crops for sourcing biofuels within the EU. The EurActive report concluded that 'introduction of any ILUC factor would probably rule out high-emitting conventional biodiesels, the majority of Europe's biofuels production'.¹⁹

Indeed, if ILUC were to be taken into account on a crop-by-crop basis, it is likely that many feedstocks, both domestic and imported, would no longer qualify for the sustainability criteria's requirement that biofuels represent a 35% savings in greenhouse gas emissions as compared to fossil fuels. Corroborating this conclusion, a recent report commissioned by the EC, 'EU Transport GHG: Routes to 2050', concluded that 'it is not possible (and useful) to determine cost

¹⁶ European Commission, *supra* n. 8, at 14.

¹⁷ J. Kanter, *Questions about Biofuels' Environmental Costs Could Alter Europe's Policies*, N.Y. Times (Feb. 12, 2010), <http://query.nytimes.com/gst/fullpage.html?res=9901E3D81231F931A25751C0A9669D8B63> (accessed June 20, 2012).

¹⁸ *Biodiesels pollute more than crude oil, leaked data show*, EurActive.com (Jan. 27, 2012), <http://www.euractiv.com/climate-environment/biodiesels-pollute-crude-oil-lea-news-510437> (accessed June 20, 2012).

¹⁹ *EU Report Questions Conventional Biofuels' Sustainability*, *supra* n. 15.

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effectiveness figures for [conventional] biofuels' because their indirect effect – measured in cleared forests and grasslands (ILUC) – make it a CO₂-emitting technology'.²⁰

There is also considerable pressure on the EU not to include ILUC factors in their sustainability requirements as these may disqualify biofuels producers from any subsidies linked to greenhouse gas emissions savings targets. Allegations have emerged that EU bodies have been pressured by industry representatives to approach ILUC with extreme caution, emphasizing the uncertainty of the science and perhaps even distorting the assumptions of the models so that the problem would appear less grave.

For example, after the release of the EC's 2010 report on ILUC, Reuters reported that experts critiqued one of its primary sources, a 2010 IFPRI study,²¹ suggesting it was biased against discerning negative impacts. They stated that the report lessened the estimated contribution of traditional biofuels toward the EU's 10% renewable energy target and overestimated other, less energy-intensive sources. For example, the report assumed that 20% of new cars would be electric by 2020. The EC was accused of requesting that IFPRI researchers 'use a five-fold exaggeration of its own electric car forecasts'.²² The article also claimed that the model was based on a much larger percentage of second-generation biofuels than will be commercially available.²³ While one of the lead authors, David Laborde, denied that the assumptions were biased, he did confirm that the EC had wrongly estimated the ratio of cleaner bioethanol to dirtier biodiesel at 55/45, which in fact would be closer to 80/20.²⁴ Reuters invoked transparency laws to access a number of emails between EC departments, and reported that EU agricultural officials had cut sections of the IFPRI Report that showed how soybean biodiesel could be four times more damaging to the climate than standard diesel.²⁵

The 2011 IFPRI Report corrected some of these assumptions. This report estimated a higher total percentage of biofuels contributing the RED renewable energy target (8.8% instead of 5.6%). The ratio of biodiesel to bioethanol used 83/17, was based upon more accurate forecasts. The report also increased the

²⁰ A. Schrotten et al., *Cost effectiveness of policies and options for decarbonising transport* (2011), AEA Technology plc, European Commission Directorate-General Climate Action, www.eutransport.ghg2050.eu (accessed June 20, 2012).

²¹ P. Al-Riffai, B. Dimaranan & D. Laborde, *Global Trade and Environmental Impact Study of the EU Biofuels Mandate*, Final Report, Intl. Food Policy Inst. (March 2010).

²² Harrison, *supra* n. 3.

²³ *Ibid.*

²⁴ *Ibid.*

²⁵ *Ibid.*

estimate of peat land emissions. The result was a higher estimate of the impact of land-use change.²⁶

More broadly, there has been disillusionment with the EU's support for biofuels based upon the allegation that they reflect industry special interests rather than environmental goals. An April 2012 report from EurActive quoted an European Parliament official stating that the emphasis on biofuels in the renewable energy targets responded to pressure from the agricultural and car lobbies. These industries felt that biofuels targets would provide financial rewards to offset some of the other costs of the EU's clean energy requirements.²⁷

The report also quoted Laborde as stating:

The truth is that policy makers inside and outside Europe are doing biofuels for other reasons than environmental ones. It's a new and easy way to give subsidies to farmers, and it's also linked to industrial lobbies that produce these biodiesels... They want to diversify the energy supply, and keep their foreign currencies instead of buying oil from the Middle East. They prefer to keep it for something even if it is not efficient or even green.²⁸

Including an ILUC factor in sustainability criteria may undermine the industry groups that lobbied for biofuels targets.

2.3 STUDIES AND INDUSTRY RESPONSE

The 2011 IFPRI Report concluded that palm oil is the most important source of land-use change emissions, due to conversion of peatlands.²⁹ As peatlands store gases that contribute to climate change, their conversion results in high emissions. Under existing sustainability criteria, EU imports of palm oil are not sourced from peatlands. The 2008 Report from the JRC Institute for Environment and Sustainability, one of the sources for the EC's 2010 Report on ILUC, came to the startling conclusion that 'if roughly...2.4% of biodiesel comes directly *or indirectly* from palm oil grown on peatland, the GHG savings from EU biodiesel are cancelled out.'³⁰ (Emphasis added) A report by Wetlands International concluded that biofuels targets have led to an increase to the deforestation of peatlands to make room for new plantations in Southeast Asia. The report indicated that the

²⁶ D. Laborde, *Assessing the Land Use Change Consequences of European Biofuel Policies*, Intl. Food Policy Inst. 36, 107–108 (Oct. 2011).

²⁷ *EU Report Questions Conventional Biofuels' Sustainability*, *supra* n. 15.

²⁸ *Ibid.*

²⁹ Laborde, *supra* n. 26, at 62–63.

³⁰ R. Edwards et al., *Biofuels in the European Context: Facts and Uncertainties* (European Commn. Jt. Research Centre, Inst. Env. & Sustainability 2008).

ecosystem was increasingly imperiled, and biofuels-related ILUC is a major driver of this problem.³¹

Another source of concern is the impact of ILUC in biodiverse ecosystems of Brazil. One academic study found that ILUC emissions from forecasted growth in demand for sugarcane ethanol and soy biodiesel in Brazil would overcome emissions savings from biofuels use. This is because the additional cultivation would push cattle rangelands into new territory, primarily the Amazon rainforest and the cerrado ecosystem. The study examined areas of forecasted deforestation, reporting that:

Sugarcane ethanol and soybean biodiesel would be responsible for 41% and 59% of this indirect deforestation, respectively. These percentages were determined by fulfilling only the demand for sugarcane ethanol, while keeping soybean biodiesel production at current levels and vice-versa. Higher potential productivity of grass favors allocation of rangelands in Amazonia instead of in other native habitats.³²

Another study developed a statistical model proving that the increase in biofuels production was pushing other crops into agricultural 'frontier' areas, in particular the Amazon rainforest.³³

But biofuels-related ILUC is an immature area of study. The results of the sugarcane ethanol studies, for example, are contested by the 2011 IFPRI Report, which suggested that ethanol had a relatively low contribution to land-use change as compared to biodiesel.³⁴ As documented subsequently, the EU has taken the position that encouraging imports of Brazilian sugarcane ethanol will have a positive impact on the RED's emissions-related goals.

Perhaps not surprisingly, producers of biofuels have emphasized the inconclusiveness of the science, and the gaps and discrepancies in the analyses that have been performed. One example can be found on SugarCane.org, a website developed by the Brazilian Sugarcane Industry Association and the Brazilian Trade and Investment Promotion Agency 'to serve as a global information hub on sugarcane products and their economic, environmental and social benefits around the world'.³⁵ The website contains an article addressing ILUC from biofuels

³¹ Wetlands International, *New figures: palm oil destroys Malaysia's peat swamp forests faster than ever*, Press Release (Feb. 1, 2011), <http://www.wetlands.org/NewsandEvents/NewsPressreleases/tabid/60/articleType/ArticleView/articleId/2583/Default.aspx> (accessed June 20, 2012).

³² D.M. Lapola et al., *Indirect land-use changes can overcome carbon savings from biofuel in Brazil* 107 Procs. Natl. Acad. Sci., 3388–3393 (2010), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2840431/> (accessed June 8, 2012).

³³ E.Y. Arima et al., *Statistical Confirmation of Indirect Land Use Change in the Brazilian Amazon*, 6 Envtl. Research Letters (2011), <http://iopscience.iop.org/1748-9326/6/2/024010> (accessed June 8, 2012).

³⁴ Laborde, *supra* n. 26, at 87, 14.

³⁵ SugarCane.org, *Spreading the Word about Clean Solutions from Sugarcane*, <http://sugarcane.org/unicaglobal/about-this-site> (accessed June 20, 2012).

production in Brazil. The article stated that there is no scientific consensus on the issue, citing the range of figures for ILUC-related carbon dioxide emissions calculated by the 2011 IFPRI study as well as US regulatory bodies. It identified several sources of uncertainty, such as the lack of available data, the use of inaccurate default values, the inability to link the models to other, related agricultural sectors and the inability to accurately take into account shifting conditions of production due to both market and regulatory factors. Instead, they concluded that the best response is internationally negotiated solutions for better land management and protection of imperiled ecosystems.³⁶

Further, regarding the leaked EU figures that concluded certain types of biofuels were as dirty as oil from Canadian tar sands, a spokesperson from the European Biodiesel Board stated that the science was too contradictory to place any faith in these results. She also called into question the EU JRC and IFPRI Reports, as they were not consistent with the results of studies performed in the US.³⁷ Industry representative Gerard Tubery, Chairman of the lobby group Copa-Cogeca's Working Party on Oilseeds and Protein Crops, also denounced the findings of this Report on the basis that their models for calculating emissions from land-use change were not based upon international standards.³⁸

2.4 THE COMPLEXITY OF REGULATING ILUC

In a candid statement to EurActive, the chief author of the 2011 IFPRI Report, Laborde, well summarized the problem facing the EU. He said that the EU's biggest error was 'that we started to make a policy without knowing the effect it would have....We are now discussing the land use effect after saying for ten years that we need biofuels to reduce emissions. It was a serious mistake.'³⁹

In setting renewable energy targets to begin with, the EU created the obligation to respond to this perverse impact on greenhouse gas emissions. Yet, due to the controversial nature of the problem, as well as its sheer complexity and the lack of established scientific analyses, devising an appropriate regulatory response to ILUC is a steep challenge.

Current EU biofuels sustainability are much less ambitious in their scope. They apply only to the crops that supply the EU with its biofuels, and are implemented on a producer-by-producer basis. Responding to ILUC will require

³⁶ SugarCane.org, *Measuring changes in land-use*, <http://sugarcane.org/sustainability/preserving-biodiversity-and-precious-resources/measuring-changes-in-land-use> (accessed June 8, 2012).

³⁷ *Biodiesels pollute more than crude oil, leaked data show*, *supra* n. 18.

³⁸ *Indirect Cost of Conventional Biofuels Highlighted in New Study*, 16 Intl. Centre Trade & Sustainable Dev. (2012) <http://ictsd.org/i/news/biores/131117/> (accessed June 20, 2012).

³⁹ *EU report questions conventional biofuels' sustainability*, *supra* n. 15.

taking into account impacts that occur beyond the spatial boundaries of biofuels production for the EU, and that concern agricultural products that may not even be consumed in the EU. ILUC is a macro-level problem, for which micro-level biofuels producers cannot be held responsible. Instead, ILUC results from complex market dynamics combined with large-scale regulatory failures to protect threatened ecosystems on the part of the producing countries.

Another key driver is the growing global demand for agricultural production for both food and fuel, and its resultant impact on all ecosystems that yield cropland. Some NGOs, such as Transport and Environment, have lobbied the EU to drop its targets, or ensure that no 'first generation' biofuels could count toward sustainability targets.⁴⁰ However, the EU has maintained its commitment to the RED and FQD targets.

The following section focuses on another challenge to crafting an appropriate response to ILUC: international trade law. Just as the scientific uncertainty and complexity of the problem has become a principal argument of industry that the EU should not introduce regulations, these same factors may mean that regulations do not conform to WTO law.

3 THE EC'S PROPOSED REGULATORY OPTIONS AND THEIR RELATIONSHIP WITH WTO LAW

The fact that both IFPRI Reports on ILUC were commissioned by the EC's DG Trade demonstrates that the EC has trade concerns in mind when considering its response to ILUC. The following analysis will focus upon the different options that the EC proposed in its 2010 report (apart from doing nothing but continuing to monitor the problem). It should be noted that, barring more specific information on the regulatory options, this is a broad-brush analysis. However it highlights issues with larger significance to the relationship between WTO law and national environmental regulation; these issues are addressed in the subsequent analysis.

3.1 INTRODUCING ADDITIONAL SUSTAINABILITY CRITERIA FOR CERTAIN BIOFUELS OR ATTRIBUTING ILUC EMISSIONS BY FEEDSTOCK

The EC outlined two options based upon regulating specific types of biofuels. The first is to apply additional sustainability criteria to some biofuels, focusing these on ILUC impacts. The second is to attribute emissions values to particular biofuels feedstocks based upon their contribution to ILUC. These two options raise similar trade concerns; thus they will be considered together.

⁴⁰ *Biofuels: Dealing with Indirect Land Use Change*, Transport & Env. briefing.

The EC did not outline these regulatory options in depth, but simply listed them; there are unanswered questions about how they would be applied. Thus the first option leaves open questions about the precise nature of the additional criteria and the selection criteria for its applicability. Perhaps producers who grew certain types of biofuels in countries with particular ecosystems, such as peatlands, would be subject to additional scrutiny about the impacts of their production on ILUC. Also possible is that some biofuels would be subject to additional requirements for direct emissions savings. This might include, for example, minimum yields, the efficiency of conversion from feedstock to biofuels or using biofuels waste products to generate energy or for other purposes.

The second option, to attribute certain emissions values to biofuels by feedstock-based upon their contribution to ILUC, seems more likely; there is some indication that the EC are thinking of introducing at least minimal categories to distinguish types of biofuels based upon their emissions level. The International Centre for Trade and Sustainable Development reported in its trade digest in April 2012, 'Brussels is due to publish a proposal measuring the indirect emissions caused by biofuels later this year, distinguishing between low-emitting biofuels such as ethanol and high-emitting ones like biodiesel.'⁴¹

The strength of these approaches is that they target particular biofuels which contribute the most to ILUC. However, they pose the risk that they will impose regulatory requirements so stringent that producers of biofuels with negative ILUC impacts will simply export to different markets that do not have such requirements.

Another concern with both of these options is that they would have a perverse impact with respect to the FQD, which stipulates that there must be a 6% reduction in greenhouse gas emissions, achieved in part through blending lower-emission biofuels with fuel. If the standard for emissions savings is stricter, this may mean that overall more biofuels must be produced to fulfil the required threshold. This could result in greater levels of ILUC.⁴²

The second option, attributing ILUC emissions by feedstock has already been adopted as part of California's Low Carbon Fuels Standard (LCFS), which provides a useful comparative study. The establishment of ILUC emissions values has proven very controversial, and the uncertainties in the science have also made the effort susceptible to industry pressure. For example, the ILUC factor for corn ethanol was halved between 2010 and 2011.⁴³

⁴¹ *Indirect Cost of Conventional Biofuels Highlighted in New Study*, *supra* n. 38.

⁴² *Biofuels and indirect land use change: the case for mitigation*, 21 (Ernst & Young 2011).

⁴³ *RFA: CARB to cut LCFS penalty for ethanol in half*, Biofuels J. (2010), www.biofuelsjournal.com/articles/RFA__CARB_to_Cut_LCFS_Penalty_for_Ethanol_in_Half-101602.html (accessed June 20, 2012).

The California Air Resources Board that formulated the criteria also raised some additional concerns about modelling ILUC. These included the fact that ILUC is a dynamic issue and will need to be re-evaluated frequently. This creates regulatory uncertainty, with a negative impact on biofuels producers and markets.⁴⁴ Similar problems would likely arise for the EU.

Also, there will be different methodologies for calculating ILUC-indirect emissions and direct emissions. The latter are already included in the relevant Directives, and the EU has produced a calculation methodology. There could be inconsistencies within the EU's framework for climate change mitigation, such as its Emissions Trading Scheme.⁴⁵ In sum, though they have the advantage of providing a relatively direct response to the regulatory problem of ILUC-related emissions, these approaches have some potential shortcomings.

3.2 TRADE CONSIDERATIONS

3.2[a] *Most Favoured Nation Principle*

8 The options outlined raise questions with respect to the Most Favoured Nation (MFN) Principle as articulated in GATT Article I(1). The core of the MFN Principle is that Member States should not grant import advantages selectively to certain trade partners. More formally, Article I(1) stipulates that countries cannot discriminate between WTO Members with respect to customs duties and charges, rules of import and export, and taxes and regulations. Whatever advantage, privilege favour or immunity is extended to one must be extended to all.⁴⁶ Article I(1) compares treatment between a category of imported products (in this case biofuels) and 'like' products imported from any third country that is a WTO Member State.

Singling out certain feedstocks (or ecosystems) for additional regulatory requirements will disproportionately impact certain trade partners. A country that grows particular crops may argue that they have little choice which type of biofuels to produce due to natural or industry-related constraints. Therefore the regulation may be seen as identifying these countries for discriminatory treatment.

⁴⁴ Final Report of the CARB Expert Subgroup on *Comparative and Alternative Modelling Approaches* (2010), <http://www.arb.ca.gov/fuels/lcfs/workgroups/ewg/010511-final-rpt-indirect-effects.pdf> (accessed June 20, 2012).

⁴⁵ *Biofuels and indirect land use change: the case for mitigation*, *supra* n. 42, at 22.

⁴⁶ See p. 424, Art. I(1) of the General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 17 (1999), 1867 U.N.T.S. 190, 33 I.L.M. 1153 (1994) [hereinafter GATT 1994].

Allocating ILUC greenhouse gas emissions by feedstock implies changes to the existing default values that the EU established as part of the RED.⁴⁷ These default values calculate the amount of emissions savings of each feedstock when compared to fossil fuels; the higher the value, the cleaner the biofuel. The current required savings is 35%; this jumps to 50% in 2017.

Some of the default values vary vastly based upon the way in which biofuels from a particular feedstock are produced. For example, palm oil with production method unspecified offers only a 19% savings over fossil fuel. This is one of the lowest default values. Palm oil produced with methane capture offers 56% savings, which meets the 2017 target. Similarly, wheat ethanol varies between 16% and 69% depending on production method. These differences provide incentives for producers to adopt cleaner production technology in order to gain better access to the EU market. Yet producers of biofuels with high ILUC values would take on an emissions burden that was not directly connected to the way they produced their biofuels. They would have to work very hard to reduce the direct emissions from their crops to the extent that they would qualify for the EU market. The addition of another variable for ILUC-related emissions would create winners and losers, and it is possible that some of these losers may feel that the additional regulation is particularly unfair.

Palm oil would be one of these losers. If the ILUC-based reduction reached more than 6%, this would mean that even palm oil produced following the EU's proscribed best practice of capturing methane would no longer qualify. While current emissions savings for palm oil can be altered based upon behaviour, the ILUC figure is beyond the reach of producers, and instead based upon fundamental ecosystem characteristics of the producing country. Thus, it introduces a type of discrimination between biofuels tied to the characteristics of certain producing countries and not others.

3.2[b] *The National Treatment Principle*

The National Treatment Principle (NTP) stipulates that a Member State must treat imported products equally to its own domestic products, with respect to taxes and regulations. It is certainly possible that a country would bring forth a complaint under the NTP of either GATT Article III(4) or the TBT Agreement's Article 2.1. The TBT Agreement only applies to certain types of measures that can be described as 'technical'. The definition of technical contains several components: the regulations must refer to an identifiable product or group of products, must lay

⁴⁷ RED, *supra* n. 1, at Annex V.

down product characteristics, and must be mandatory.⁴⁸ Based upon recent TBT jurisprudence from *US – Tuna II*, this chapter assumes that the TBT Agreement would apply to ILUC criteria.⁴⁹

In some respects, making a claim under the NTP of either GATT Article III(4) or TBT 2.1 seems more difficult than under the MFN. This is because introducing extra sustainability criteria to certain biofuels, or adding ILUC emissions values based upon feedstock, would also have a negative impact on domestic biodiesel producers. Increasing the ratio of (largely imported) cleaner ethanol to (largely domestic) dirtier biodiesel has been a common recommendation for redressing negative environmental impacts of biofuels production.⁵⁰

This negative impact on domestic biodiesel has important implications. There will likely be strong resistance to these options from the EU biodiesel producers who would face additional requirements. Also, incorporating ILUC factors tied to specific biofuels would be beneficial for foreign ethanol producers. For these reasons, it is not logical that the EC would propose this approach with a protectionist aim in mind.

However, not all foreign producers would be winners. For this reason, the MFN arguments above apply in the context of the NTP. For example, under the first option, if the EU identified certain ecosystems for extra criteria, or mandated certain emissions-lowering production procedures for some biofuels, this could be seen as a means for singling out imported biofuels for less favourable treatment. Along the same lines, under the second option, if they adopted ILUC emissions values for particular feedstocks, it could be argued that these were designed to unfairly disadvantage foreign producers. As no ILUC emissions values have yet been produced, it is not possible to examine their methodology in depth, but it is likely that its scientific basis will be highly contestable. If it appears that this methodology unfairly singles out foreign producers, this could certainly be the basis for an NTP claim.

⁴⁸ WTO Appellate Body Report on European Communities – Measures Affecting Asbestos and Asbestos-Containing Products (*EC-Asbestos*), WT/DS135/AB/R, adopted Mar. 12, 2001, paras. 66–70.

⁴⁹ In this report, the AB determined that the TBT Agreement applied to non-product related process-oriented regulation, and also that it applied to regulations that are technically voluntary. These were central unresolved questions about the TBT Agreement's applicability to EU biofuels sustainability criteria. See WTO Appellate Body Report on United States-Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products (*US – Tuna II*), WT/DS381/AB/R, adopted May 16, 2012.

⁵⁰ See, e.g., Al-Riffai, et al., *supra* n. 21; *Biofuels and global trade study goes online*, European Commn., Press Release (Mar. 25, 2010), <http://trade.ec.europa.eu/doclib/press/index.cfm?id=542> (accessed June 20, 2012); Laborde, *supra* n. 26, at 14; RED, *supra* n. 1, at Art. 16.

3.2[c] GATT Article XX

If ILUC criteria violated Article I(1) or Article III, the dispute settlement bodies would then consider whether the measure qualified as an exception to the GATT under Article XX. These exceptions are listed in Article XX's subparagraphs. Article XX also has a chapeau that serves as an additional safeguard to ensure that the measure is not protectionist in intent. Jurisprudence on Article XX has stipulated that the Appellate Body (AB) first evaluates the measure's compliance with the subparagraph and then the chapeau.⁵¹ The first step is to clarify the regulatory objective at stake and the applicability of the listed exceptions.

The RED committed the EC to developing methodologies to '*minimise greenhouse gas emissions* caused by indirect land-use changes.' (Emphasis added) It also states that the EU should 'incentivise sustainable biofuels which *minimise the impacts* of land-use change and *improve biofuel sustainability* with respect to indirect land use change'.⁵² Emphasis added] This suggests that the EU's regulatory objectives are to reduce ILUC-related emissions as well as negative sustainability impacts of ILUC more generally.⁵³ This interpretation is supported by the EC's 2010 Report on ILUC.⁵⁴

The most relevant Article XX subparagraphs are Article XX(b), which deals with measures 'necessary to protect human, animal or plant life or health', and Article XX(g), which deals with measures 'relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption'.⁵⁵

3.2[c][i] Article XX(b)

Under Article XX(b), the EU might argue that their regulatory objective of reducing ILUC emissions is necessary to prevent the negative human, animal and plant health consequences of climate change. There is no precedent for this argumentation, which would have larger significance as climate change is an emerging global environmental problem whose importance has not been evaluated in the context of Article XX. They also might argue that the same types of ILUC

⁵¹ GATT/WTO Dispute Settlement Practice Relating to GATT Art. XX, paras. (b), (d), and (g), World Trade Organization, Committee on Trade and Environment, WTO/CTE/W/203, Mar. 8, 2002, 6–10.

⁵² RED, *supra* n. 1, at Preamble, para. 85.

⁵³ The EU stated that the broader regulatory goals outlined in the second statement should be incentivized. However, as noted, the EC has not proposed incentive-based measures.

⁵⁴ Al-Riffai et al., *supra* n. 21, at 3–4.

⁵⁵ See p. 455 of the Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 4 (1999), 1867 U.N.T.S. 154, 33 I.L.M. 1144 (1994) [hereinafter Marrakesh Agreement or WTO Agreement].

that create the highest emissions also imperil animal and plant life or health, through deforestation and biodiversity loss. Regulation addressing solely emissions levels does not take these impacts into account. The EU might establish a correlation between high emissions from ILUC and other negative sustainability impacts such as deforestation and biodiversity loss, but this is a very speculative assessment.

The WTO Appellate Body (AB) must then determine if the specific requirements of the subparagraph have been met. Under XX(b), if they followed the established approach, the AB would apply the necessity test. This entails determining the importance of the value at stake, the contribution of the measure to the regulation's goals, and whether it was the least trade-restrictive means reasonably available to achieve this goal.

In general, there is not an excessive amount of judicial scrutiny when establishing the importance of the regulatory goal at stake. Such scrutiny would be politically sensitive given the WTO's stated commitment to respecting Member's rights to pursue the regulatory goals of their choosing. As the AB stated in *US – Gasoline*:

WTO Members have a large measure of autonomy to determine their own policies on the environment (including its relationship with trade), their environmental objectives and the environmental legislation they enact and implement. So far as concerns the WTO, that autonomy is circumscribed only by the need to respect the requirements of the General Agreement and the other covered agreements.⁵⁶

For this reason, particularly due to international recognition of climate change as an urgent environmental problem, the AB would probably confirm the importance of the value at stake.

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With respect to the option of appending extra sustainability criteria to some biofuels, it would be difficult to make an assessment of the second two components of the necessity test without a better idea of the specific criteria that the EU had in mind. It is easier to analyse the more likely option that the EU would assign ILUC emissions values to particular biofuels.

The contribution of this solution to the regulatory objective pursued is fundamental, in the sense that the overall aim of the EU RED and FQD is to mitigate climate change. If they actually increased climate change, this would be a serious concern. This approach directly targets biofuels that contribute the most to ILUC, and attempt to mitigate this negative impact.

Yet this conclusion can also be critiqued on several grounds. First, the introduction of additional emissions does not address the EU's regulatory

⁵⁶ WTO Appellate Body Report on United States – Standards for Reformulated and Conventional Gasoline, WT/DS2/R (*US – Gasoline*), adopted Apr. 29, 1996, 29.

objectives, as producers of biofuels with high ILUC emissions would simply export these to other markets. Second, regulating ILUC solely with respect to biofuels and not other agricultural products is inconsistent and ineffective, as biofuels constitute only a small percentage of agricultural production. Adding regulations will increase the burden on producers without making a significant contribution to the regulatory goal of preventing climate change.

Third, it is an extremely indirect approach, as it does not have anything to do with the biofuels that are actually being imported into the EU. It is debatable whether these biofuels can be seen as responsible for ILUC, when their producers may have no ability to influence the ILUC for which their biofuels are purportedly responsible. Finally, the specific emissions savings levels the EU establishes will be vulnerable to challenge on methodological grounds.

Finally, the AB may determine that a less trade-restrictive means of regulating ILUC is reasonably available. The critique that this approach is ineffective and indirect may lead to the conclusion that the EU should pursue a broader and more integrated approach to responding to ILUC that takes into account its other relevant regulations. This less trade-restrictive approach might also involve pursuing more international solutions to preventing climate change and deforestation/biodiversity loss that results from the conversion of frontier areas into agricultural production. All of these reasons suggest that it would be unlikely that this regulatory option could be justified under Article XX(b).

3.2[c][ii] Article XX(g)

Under Article XX(g), the EU might argue that introducing ILUC factors relates to the conservation of exhaustible natural resources, as the failure to do so would lead to deforestation of imperiled ecosystems and associated biodiversity loss. This focus on species conservation would parallel *US – Shrimp*.⁵⁷ They might also attempt to adopt this provision to climate change. In *US – Gasoline*, the Panel agreed that clean air was an exhaustible natural resource.⁵⁸ The EU could reverse the argument: current levels of atmospheric carbon dioxide are an exhaustible natural resource that ILUC criteria help to protect.

Under Article XX(g), rather than being ‘necessary’ to fulfil the conditions of the subparagraph, the measure must ‘relate to’ the fulfilment of these conditions. The degree of connection between the measure and its policy objectives is not as strong as in Article XX(b). The *US – Shrimp* dispute has demonstrated that this

⁵⁷ WTO Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products (US – Shrimp)*, WT/DS58/AB/R, adopted June 15, 2001, para. 128.

⁵⁸ WTO Panel Report on *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/R (*US – Gasoline*), adopted Jan. 29, 1996, para. 6.37.

degree of connection must be substantial; the means and ends must be reasonably related, observably close and real.⁵⁹ There is no requirement to determine the importance of the value at stake, or the existence of less trade-restrictive means. It does not seem that the slightly weaker relationship required would have a significant impact in changing the judicial considerations outlined above. The requirement raises a similar set of problems as the Article XX(b) necessity test regarding the effectiveness of the measure in fulfilling the regulatory purpose. These problems have to do with the methodological difficulties involved with calculating ILUC values, as well as the indirectness and ineffectiveness of the approach with respect to the regulatory goal.

The subparagraph also stipulates that the measure must be taken in conjunction with restrictions on domestic production or consumption. Any additional criteria or emissions values that the EU assigned would also be assigned to feedstocks grown in the EU. Whether these additional requirements would be applied in a perfectly even-handed manner is an open question. It is possible that foreign biofuels will be more negatively impacted overall and almost inevitable that certain countries will be more negatively impacted than others.

3.2[c][iii] Article XX chapeau

As a final step, the AB would consider whether the measure complied with the Article XX chapeau. The chapeau focuses on the application of the measure rather than its content. It provides an additional safeguard to ensure that it is not 'arbitrary discrimination', 'unjustifiable discrimination' or a 'disguised restriction on trade'. If it does not meet any of these conditions, it will not comply with Article XX as a whole.⁶⁰

When determining whether the application of the measure constitutes arbitrary or unjustifiable discrimination, the AB in *US – Shrimp* established two considerations: an effort to negotiate towards concluding a bilateral or multilateral agreement and the flexibility of the measure.⁶¹

An ILUC emissions value will be calculated by the EU, rather than through a negotiation process. Further, there are no international standards for ILUC values against which these values can be measured. It is possible that the EU would enable trade partners to provide their own ILUC calculation methodology, as they do with greenhouse gas emissions in the existing Directives. This would provide some flexibility; however, these values would likely still be subject to conformity assessment, as they are under the current criteria. A more flexible approach would

⁵⁹ *US – Shrimp*, *supra* n. 57, at para. 141.

⁶⁰ *GATT/WTO Dispute Settlement Practice*, *supra* n. 51, at 22.

⁶¹ *US – Shrimp*, *supra* n. 57, at paras. 161–164, 166.

enable trade partners to address ILUC through a different regulatory approach entirely.

Methodological weaknesses underlying ILUC calculations will also be significant in this context.

The EC's 2010 Report recognized that:

Estimating the greenhouse gas impact due to indirect land-use change requires projecting impacts into the future, which is inherently uncertain, since future developments will not necessarily follow trends of the past. Moreover, the estimated land-use change can never be validated, as indirect land-use change is a phenomenon that is impossible to directly observe or measure.⁶²

In other words, ILUC emissions calculations are speculative. They are based upon an *ex ante* evaluation; actual emissions may differ from predicted emissions. This may lead to the perception that the regulation is unreliable and therefore arbitrary. It is also unilateral in its application.

In *EC – Asbestos*, the Panel clarified that a disguised restriction on trade meant that the intent of the measure was in fact protectionism; this could be discerned by examining the measure's 'design, architecture and revealing structure'.⁶³ The methodological uncertainties with calculating ILUC emissions levels make them vulnerable to the claim that they were calculated in order to disadvantage certain imported biofuels.

3.2[d] TBT Agreement

3.2[d][i] TBT 2.2

Under TBT Agreement, as with Article XX, it seems probable that the AB would deem a regulatory objective illegitimate, as this would not support their general position of deference. As the Preamble to the TBT Agreement states:

No country should be prevented from taking measures necessary...for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate.⁶⁴

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However, they do undertake a formal evaluation of the legitimacy of this objective.

Recent jurisprudence suggests that the TBT 2.2 necessity test also involves 'weighing and balancing', though of slightly different elements: the trade-restrictiveness of the technical regulation, the contribution of the measure

⁶² European Commission, *supra* n. 8, at 6.

⁶³ WTO Panel Report on European Communities – Measures Affecting Asbestos and Asbestos-Containing Products (*EC-Asbestos*), WT/DS135/AB/R, adopted Sept. 18, 2000, para. 8.236.

⁶⁴ Agreement on Technical Barriers to Trade' (TBT Agreement), Preamble, *supra* n. 56, at 120.

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and the risks of non-fulfilment. In this ‘necessity’ test, the arguments raised in the analysis of Article XX(b) are also applicable. On one hand, regulating ILUC is fundamental to achieving the primary regulatory goal of the RED. The EU might also employ a consumer deception defence similar to the US in *US – Tuna II*. In this dispute, in the context of TBT 2.2, the dispute settlement bodies identified consumer information as one of two core objectives of the measure. Specifically, they did not want consumers to be misled about whether dolphins were harmed by tuna products. Similarly, the EU might argue that consumers are in fact subsidizing biofuels. The overall objective of the EU criteria is to mitigate climate change. Therefore, consumers have the right to know that subsidies are not creating perverse incentives. These arguments both support the conclusion that the measure contributes to the achievement of the legitimate objective of mitigating climate change.

When assessing the trade-restrictiveness of the measure and its contribution to the regulatory goal, methodological shortcomings may again prove problematic. TBT 2.2 clarifies that assessing the risks of non-fulfilment can be based upon ‘*inter alia*: available scientific and technical information, related processing technology or intended end-uses of products’.⁶⁵ While the risks are serious; namely, undermining the core purpose of the RED and FQD to reduce emissions, scientific assessments of this risk are not well established.

3.3 INCREASE MINIMUM GREENHOUSE GAS SAVINGS THRESHOLD FOR ALL BIOFUELS

The final regulatory option that the EC proposed deals with indirect emissions prevention by increasing the requirements for direct emissions prevention for all biofuels. The downside of this approach is that it is not directed at the problem it aims to address. There is no guarantee that a crop that provides low direct greenhouse gas emissions is not also responsible for a high level of ILUC-related emissions. Palm oil is a good example: while palm oil with methane capture provides greenhouse gas emissions savings of 56%, there are still concerns that the production of compliant palm oil is leading to deforestation of peatlands elsewhere. While this regulatory approach might result in lower ILUC overall, this would be coincidental; it might even encourage intensification of crops that lead to higher levels of ILUC if they had low direct emissions values.

As it will not single out particular crops for more stringent criteria, this option will probably be more popular with producers and thus politically more feasible, particularly with respect to the domestic industry lobbies that influenced the EU to establish biofuels targets. Another major advantage is that it will not be

⁶⁵ *Ibid.*, Art. 2.2, at 124.

bogged down in all of the methodological difficulties of calculating ILUC, and associated controversy.

The 2011 IFPRI Report recommended this course of action. They rejected the option of identifying particular feedstocks, as the introduction of additional criteria for certain biofuels would have ‘leakage’ impacts due to the interconnectedness of agricultural markets. For example, if a large additional emissions value is placed upon palm oil due to ILUC, this could simply increase the demand for biodiesel sourced from soybean oil, or producers may direct more of their product toward food rather than fuel markets. This may increase the demand for one or two feedstocks for biofuels, which could destabilize the market.⁶⁶

However, the approach suffers from a lack of clarity of intent. If it intends to combat ILUC-related emissions, its effectiveness seems dubious. If it intends simply to lower the greenhouse gas emissions from biofuels production, this raises a different set of questions: what is the justification for introducing additional requirements to the RED and the FQD now? On what basis is this calculation performed? These issues also make the regulatory approach difficult to justify from a WTO perspective.

3.4 TRADE CONSIDERATIONS

3.4[a] MFN/NTP

Unlike the previously considered options, this approach would not single out particular biofuels for additional regulatory requirements. It will probably still make a trade dispute more likely as all producers will face additional challenges in gaining access to the EU market. An increase in the requirements will mean that some crops that currently qualify under the EU’s default calculations will be pushed over the edge into non-compliance. These biofuels will face greater market access barriers. While it may increase the likelihood of a dispute based upon the protectionist nature of existing criteria, the additional ILUC factor does not seem to provide a basis for a dispute in itself, due to its even-handed application.

Rather than its discriminatory nature, the core difficulties with this approach have to do with the suitability of the regulation to the problem at stake, and whether it is more trade-restrictive than necessary. However, in raising the overall emissions savings requirement and thus making the regulation more stringent, this approach will likely increase the possibility of a dispute examining whether

⁶⁶ Laborde, *supra* n. 26, at 18, 86.

sustainability regulation has disproportionate regulatory impacts in certain countries or aims to protect domestic markets.

3.4[b] *Article XX*

3.4[b][i] *Article XX(b)*

Article XX(b) addresses measures necessary to protect human, animal or plant life or health. Although the regulatory approach of raising emissions levels across the board differs, its goals are the same: to mitigate climate change through preventing ILUC-related emissions, and to counter other negative sustainability impacts of ILUC. As outlined above, it seems likely that the AB would consider these regulatory objectives to fall within the remit of either Article XX(b) or Article XX(g).

The approach is indirect with respect to achieving specific outcomes on ILUC, but it clearly addresses the goal of reducing emissions from biofuels production. It seems difficult to argue that its regulatory aims would include preventing any other negative impacts from ILUC such as deforestation and biodiversity loss.

The AB would need to consider whether creating an additional emissions savings requirement to reflect the impact of ILUC is necessary to achieve the EU's regulatory goals. The aspect of the necessity test that seems particularly problematic is establishing the contribution of the measure to achieving the regulatory goals. This approach does not rely upon assessing ILUC levels; therefore, it will not face the same methodological scrutiny. Yet, it raises a different set of concerns. While it will self-evidently reduce emissions from biofuels production for EU markets, this reduction will not be tied directly to the EU's regulatory goal of reducing negative impacts of ILUC. The measure would be relatively ineffective in its contribution to the EU's regulatory goals. The indirectness of this approach suggests that the EU is not seeking a very high level of protection against ILUC. As outlined above, the AB might also recommend other reasonably available approaches that would be less trade-restrictive and equally effective in achieving the EU's (low) desired level of protection.

3.4[b][ii] *Article XX(g)*

Article XX(b) stipulates that the measure must relate to the conservation of exhaustible natural resources. Again, the core difficulty has to do with the suitability of the regulatory approach to the regulatory goal. The degree of connection must be substantial, and the primary regulatory goal at stake is to reduce emissions from ILUC. The connection between the goal and the regulatory approach is very tenuous; there is no proof that simply heightening emissions savings requirements will have an impact on ILUC-related emissions. If the EU

stated that their regulatory intent was simply to reduce emissions, there would be no clear justification for adding an additional level of emissions savings. It would also be difficult to justify the basis for calculating a particular requirement of emissions savings. If the EU relates this level of emissions savings to ILUC, it will not prove compelling, as there is no guaranteed correlation. There does not seem to be a clear logical basis for raising this level apart from preventing ILUC-related emissions.

Raising all emissions savings requirements equally does seem likely to comply with the second part of the subparagraph: the measure must be taken in conjunction with restrictions on domestic production or consumption. With respect to this component, the approach has an advantage over feedstock-specific options.

3.4[b][iii] Article XX chapeau

The chapeau ensures that a measure does not constitute arbitrary or unjustifiable discrimination, or a disguised restriction on trade. The addition of higher regulatory requirements risks being arbitrary and unjustifiable. The imposition of additional greenhouse gas requirements will be undertaken without consultation with other Member States. Further, the justification for doing so, ILUC, is controversial and not backed by clear international standards.

With respect to the flexibility of the measure, trade partners might criticize the imposition of additional emissions savings requirements. It is indiscriminate; therefore, it is inflexible with respect to the impact of different feedstocks on ILUC-related emissions. Instead, it imposes an equal regulatory burden on biofuels that may have no impact on ILUC-related emissions whatsoever and those that are its primary drivers. This is the opposite problem from that posed by the first two regulatory options, which identify particular biofuels that drive ILUC.

Finally, with respect to whether the measure is a disguised restriction on trade, the AB would examine its ‘design, architecture and revealing structure’ to determine whether its intent was protectionist.⁶⁷ Again, the approach is formally even-handed, and has exactly the same impact on domestic and foreign producers. However, in imposing additional requirements and pushing more biofuels out of conformity with EU targets, the measure also risks leading to more trade complaints, and scrutiny of the EU’s emissions savings rationale and methodology more generally.

⁶⁷ WTO Panel Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products (EC – Asbestos)*, WT/DS135/R, adopted Sept. 18, 2000, para. 8.236.

3.4[c] *TBT Agreement*

3.4[c][i] TBT 2.2

Many of the same concerns regarding the lack of clarity of this regulatory approach would arise under Article XX and TBT 2.2. Under TBT 2.2, the AB would need to ensure that technical regulations was not ‘more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create’. As previously reviewed, in *US – Tuna II*, the AB established an approach to this necessity test that involved evaluating the degree of contribution the measure makes to the legitimate objective, whether a reasonably available less trade-restrictive measure could achieve the same objective, and the risks of non-fulfilment.

To review the shortcomings of the approach once again, if the legitimate objective specifically had to do with ILUC-related emissions reduction, then it seems difficult to argue that this regulatory approach would be an effective means of fulfilling this objective. If the EU argued more generally that their intent was to reduce emissions from biofuels production, this would raise questions about why it was necessary, and whether it was effective, to raise their requirements from those established in the original RED and FQD. The additional regulation would only address a small percentage of emissions and leave unaddressed the larger issue of agricultural land-use change. This would make it easier to argue that another, less trade-restrictive means was reasonably available, perhaps a multilateral approach that attempted to address the problem on a wider scale.

Not addressing ILUC poses a serious risk to the EU’s regulatory objective, as it could undermine their goal of reducing emissions through the RED and the FQD. There are also global environmental risks that result from greenhouse gas emissions. However, it seems arbitrary that the EU would increase their emissions savings requirements after the RED and FQD have already come into force. The lack of clear scientific information underlying ILUC makes it difficult to justify a particular emissions savings requirement.

4 ANALYSIS

The proceeding analysis suggested that the options the EU has proposed for regulating ILUC all pose a serious risk of violating WTO law. Many of these trade concerns result from two interrelated problems. First, ILUC is an emerging environmental problem. This helps explain the thin and uneven body of scientific research, as well as the controversy about the methodological basis of ILUC calculation and ILUC’s contribution to global warming. These factors makes it easier to argue that whatever methodological approach the EU adopts has been

designed to discriminate against or between imported goods. The fact that the problem is not well-recognized also underlies the lack of international standards and multilateral agreements. It takes time and political will to establish broad consensus. Yet, this also may be problematic from a WTO perspective, as it suggests that the EU is undertaking a unilateral form of negotiation.

Second, ILUC is extremely complex. This casts doubt on the EU's methodological approach, and makes scientific assessment more difficult and controversial. The fact that ILUC involves agricultural market dynamics that span international borders may lead to the critique that the EU's approach of regulating individual producers is arbitrary. Indeed, ILUC's complexity also creates domestic challenges. There may be backlash about the effectiveness of the response and political pressure to avoid negative impacts on industry.

As this suggests, these problems do not have to do with discrimination, as such. Instead, the attempt to respond to ILUC results from internal and external pressure regarding the fact that EU alternative energy targets may have perverse impacts. Rather than an existing environmental problem, these options respond to a problem the EU helped create by mandating the use of biofuels. Thus, the EU is examining regulatory options to respond to this issue, despite the fact that all of these options will likely have a negative impact on domestic producers.

The complexity of regulating ILUC may lead to the perception that the EU is simply creating bad regulation, which should be streamlined, standardized or eliminated. However, this is not the function of the WTO. Instead, WTO disputes have repeatedly affirmed that Member States determine the regulatory objectives they wish to pursue and the level of protection they seek.

It would be possible to interpret the relevant provisions in a way that was more deferent to emerging environmental regulation. For example, in the context of the National Treatment Principle of Article III(4)/TBT 2.1, one weak point of a feedstock-based approach to regulating biofuels is that a country could argue that ILUC values were calculated in order to discriminate against certain biofuels. The emphasis in Article XX/TBT 2.2 on justifying the contribution of the measure to the regulatory aim also opens the door to criticism that particular methodologies are not effective in achieving a regulatory goal. In both cases, an underlying argument is that it may have been easier for the EU to manipulate the science due to methodological uncertainties. In such a circumstance, the AB should also take into account, either formally or informally, the precautionary principle. Even if the science is uncertain, if the measure also disciplined domestic feedstocks, this suggests that it is not protectionist by nature.

If there were an implicit spectrum where the more complex and process-oriented a regulation, the more likely to violate WTO law, ILUC regulation would be on the outer extreme. In WTO parlance, regulations based

not on the physical characteristics or functionality of a product, but the way in which it is produced, are known as non-product-related Process and Production Method (NPR PPM)-based regulations. Technically, ILUC regulations are *not* based upon NPR PPMs. They do not focus on characteristics of the production processes for biofuels for the EU market. Instead, they focus on the implications of growing a particular crop with respect to the agricultural production system as a whole. For ILUC regulations, new terminology would be necessary in order to extend the concept of process-orientation even further.

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The bias that process-oriented regulations are identified with hidden protectionism has been prevalent among WTO Members.⁶⁸ However, though it has never been stated explicitly, WTO jurisprudence has demonstrated that NPR PPMs are not always WTO-illegal.⁶⁹ If the AB adopted a deferent position toward such process-oriented regulation, this would also improve the chances that ILUC regulation would be WTO-compatible.

Another concern raised in the context of the Article XX(b) and TBT 2.2 necessity tests is that the measure may not contribute the EU's regulatory goal of reducing ILUC-related emissions as a whole, as it only applies to biofuels. Biofuels represent only approximately 2% of global agricultural production.⁷⁰ The 2011 IFPRI Report raised this concern. The report gave the example that agricultural trade liberalization from the successful conclusion of the Doha round would result in greater ILUC emissions than biofuels targets.⁷¹ This argument can be countered without denying the importance of responding to ILUC as a whole. Under the RED, EU consumers are subsidizing biofuels with the explicit understanding that they will contribute to greenhouse gas emissions savings. There is a fundamental link between addressing ILUC and achieving the aim of the RED.

With respect to concerns that the measure was ineffective as it penalized producers who were not contributing to ILUC directly, the AB should also take into account the fact that the overall regulatory goal of reducing ILUC was compelling. As long as it applied to both domestic and foreign producers, it would be appropriate to regulate biofuels producers in this manner.

⁶⁸ This view is summarized by M. Echols, *Biofuels Certification and the Law of the World Trade Organization* ICTSD, Programme on Agricultural Trade and Sustainable Development. Issue paper no. 19, Aug. 2009, 33: *The details of the biofuels policy should help to justify the choice of targeted processes, products and benefits, and whether there will be a product focus (such as a percentage biofuels content for gasoline, or research support for next-generation products) or a production focus (a ban on imports of biofuels from deforested lands, or support for biofuels made using a particular process). The former is a standard goods-based approach. The latter involves a PPM, which is usually looked upon with some skepticism and the belief that it will be a disguised protectionist measure.*

⁶⁹ See, e.g., *US – Tuna II*, *supra* n. 49; *US – Shrimp*, *supra* n. 57.

⁷⁰ *Towards Sustainable Production and Use of Resources: Assessing Biofuels* UN Env. Programme 18 (2009).

⁷¹ Laborde, *supra* n. 26, at 86.

Though it is not a part of the original treaty text, the AB's interpretation of the Article XX chapeau suggests the importance of examining whether Members have pursued a negotiated solution to the regulatory objective at stake (though it does not require a successful conclusion). Yet one impact of this approach is that it emphasizes not only preventing discrimination but also bringing about harmonization, which is not the goal of the WTO. Therefore, again, it is useful to consider whether a particular regulation represents an important environmental objective, rather than focusing on procedural requirements that aim to bring national regulation into a multilateral framework. The underlying intent of these interpretations is to avoid losing the forest (avoiding discrimination) for the trees (the lack of maturity of the methodology).

5 CONCLUSION

It might be said that ILUC is a perfect storm for EU biofuels regulation. Countervailing forces have conspired to put the EU in a difficult position. On the one hand, they have an obligation to respond to a problem that risks turning their regulatory goal on its head: ILUC could well mean that fulfilling the requirements of their renewable energy Directives would lead to higher emissions overall. On the other hand, the addition of regulatory burdens to respond to ILUC will be unpopular with both domestic and foreign biofuels producers, and also may not be compatible with WTO law.

This analysis of the compatibility of the EU's proposed regulatory options with GATT Articles I, III and XX and the TBT Agreement Articles 2.1 and 2.2 is very preliminary. The outcome of a dispute would depend on the details of the EU's regulation and how the AB interpreted relevant provisions of WTO law. Although it is not possible to predict the outcome of a dispute, it is clear that all of the regulatory options that the EU has proposed to respond to ILUC pose a serious risk of violating WTO law.

These WTO challenges result from inherent characteristics of ILUC, particularly its complexity and recent emergence as an environmental problem. These challenges do not in principle suggest that a regulation violates WTO law's core function of preventing discrimination between or among WTO Members. Instead, they have to do with the methodological basis and justification for the regulation. Not all environmental regulation is altruistic; some does intend to protect domestic markets. However, the WTO should ensure that measures without protectionist intent are not swept away in the process.

WTO law may pose particular constraints for emerging environmental problem if the underlying science is controversial or unresolved, and multilateral solutions have not emerged. Yet, multilateral solutions are compromise-driven and

may not respond adequately when they emerge. Barring a strong international framework for combatting an environmental problem, countries may be tempted to set unilateral regulation to respond more immediately. These issues are applicable not only to ILUC regulation, which attempts to mitigate climate change driven by agriculture, but also climate change regulation more generally.

There is a spectrum of possible interpretation of the WTO-compatibility of ILUC regulation. As outlined in the above analysis, the AB would be able to adopt a more deferent approach within the context of the existing Articles. In interpreting the WTO-compatibility of ILUC regulation, the AB is in a difficult position of evaluating environmental goals outside their core area of expertise. Yet unavoidably, not only do AB decisions reflect the influence of emerging environmental norms, but also have the potential to further shape their evolution.

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